



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0545; Directorate Identifier 2013-NM-048-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 727 airplanes. This proposed AD is intended to complete certain mandated programs intended to support the airplane reaching its limit of validity (LOV) of the engineering data that support the established structural maintenance program. This proposed AD would require an inspection for cracks in the main wheel well pressure floor and a preventive modification or permanent repair, as applicable. We are proposing this AD to prevent cracking in the main wheel well pressure floor, which could result in reduced structural integrity of the airplane, and decompression of the cabin.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Galib Abumeri, Aerospace Engineer, Airframe Branch, ANM 120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Blvd., Suite 100, Lakewood, CA 90712 4137; phone: 562-627-5324; fax: 562-672-5210; email: [galib.abumeri@faa.gov](mailto:galib.abumeri@faa.gov).

SUPPLEMENTARY INFORMATION:

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0545; Directorate Identifier 2013-NM-048-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

## **Discussion**

As described in FAA Advisory Circular 120-104 ([http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/120-104.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/120-104.pdf)), several programs have been developed to support initiatives that will ensure the continued airworthiness of aging airplane structure. The last element of those initiatives is the requirement to establish a LOV of the engineering data that support the structural maintenance program under 14 CFR 26.21. This proposed AD is the result of an assessment of the previously established programs by The Boeing Company during the process of establishing the LOV for Model 727 airplanes. The actions specified in this proposed AD are necessary to complete certain programs to ensure the continued airworthiness of aging airplane structure and to support an airplane reaching its LOV.

We received reports of cracks on Model 727 airplanes along the ends of the pressure floor reinforcing beads at stations 930 and 940 in the main wheel well. Eight operators have reported 34 cracks on 20 airplanes. The cracks ranged from 0.38 inch to 15.25 inches, and the airplanes had accumulated between 24,000 and 42,000 total flight cycles and between 24,000 and 49,500 total flight hours. Cracking along the ends of the reinforcing beads in the pressure floor of the main wheel well could result in reduced structural integrity of the airplane, and decompression of the cabin.

**Relevant Service Information**

We reviewed Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2013-0545.

**Other Relevant Rulemaking**

On August 26, 1992, the FAA issued AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992), for all Model 727 series airplanes. AD 92-19-11 requires repetitive inspections to detect fatigue-related cracking of the main landing gear wheel well pressure floor adjacent to certain body stations, and repair if necessary. AD 92-19-11 requires the preventive modification or permanent repair only for airplanes having line numbers 001 through 1432, later identified as Group 1 airplanes in Boeing Service Bulletin 727-53-0149, Revision 3, dated November 2, 1989; and Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

On January 16, 1990, the FAA issued AD 90-06-09, Amendment 39-6488 (55 FR 8370, March 7, 1990), for Model 727 series airplanes listed in Boeing Document No. D6-54860, "Aging Airplane Service Bulletin Structural Modification Program – Model 727," Revision C, dated December 11, 1989. AD 90-06-09 requires modifications using service bulletins listed in Section 3 of Boeing Document No. D6-54860, Revision C, dated December 11, 1989. One of the service bulletins listed in Boeing Document No. D6-54860 is Boeing Service Bulletin 727-53-0149, Revision 2, dated March 20, 1981. The effectivity of Boeing Service Bulletin 727-53-0149, Revision 2, dated March 20, 1981, is airplanes having line numbers 001 through 1432. These airplanes were later identified as Group 1 airplanes in Boeing Service Bulletin 727-53-0149, Revision 3, dated November 2, 1989; and Boeing Service Bulletin

727-53-0149, Revision 4, dated June 27, 1991. Therefore, AD 90-06-09 only requires the permanent repair or modification for Group 1 airplanes.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information identified previously, except as discussed under "Differences Between the Proposed AD and the Service Information."

### **Differences Between the Proposed AD and the Service Information**

Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991, includes repetitive inspections and preventive modification and permanent repair instructions for both Group 1 and Group 2 airplanes, as identified in that service bulletin. This proposed AD would mandate the preventive modification and permanent repair only for airplanes having line numbers 1433 through 1832 inclusive, identified as Group 2 airplanes in Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991, includes the preventive modification as optional terminating action for the repetitive inspections included in that service bulletin. This proposed AD would mandate accomplishment of the permanent repair or preventive modification (depending on the inspection findings) as part of the actions identified by the 727 Aging Fleet Structures Working Group as being necessary to support an airplane reaching its LOV.

### **Costs of Compliance**

We estimate that this proposed AD affects 106 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	2 work-hours X \$85 per hour = \$170	\$0	\$170	\$18,020
Modification/repair	Up to 272 work-hours X \$85 per hour = \$23,120	\$5,565	Up to \$28,685	Up to \$3,040,610

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2013-0545; Directorate Identifier 2013-NM-048-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD affects AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

**(c) Applicability**

This AD applies to The Boeing Company Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, certificated in any category, having line position 1433 through 1832 inclusive, identified as Group 2 airplanes in Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD is intended to complete certain mandated programs intended to support the airplane reaching its limit of validity (LOV) of the engineering data that support the established structural maintenance program. We are issuing this AD to prevent cracking in the main wheel well pressure floor, which could result in reduced structural integrity of the airplane, and decompression of the cabin.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Definition of Detailed Inspection**

For the purposes of this AD, a detailed inspection is an intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required.

**(h) Inspection and Repair/Modification**

At the later of the times in paragraphs (h)(1) and (h)(2) of this AD: Do a one-time detailed, high frequency eddy current (HFEC), or dye penetrant inspection for cracks in the main wheel well pressure floor at body stations 930, 940, and 950, between left and



right buttock line 50 and the side of the airplane body, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

(1) Prior to the accumulation of 60,000 total flight cycles, or

(2) Within 2,500 flight cycles or 2 years after the effective date of this AD,

whichever occurs first.

**(i) Preventive Modification**

If no cracks are found during the inspection required by paragraph (h) of this AD: Before further flight, do the preventive modification, in accordance with Part IV of the Accomplishment Instructions of Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991. Doing the preventive modification terminates the repetitive inspections required by paragraph (d) of AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

**(j) Permanent Repair**

If any crack is found during the inspection required by paragraph (h) of this AD: Before further flight, do the permanent repair, in accordance with Part III of the Accomplishment Instructions of Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991. Doing the permanent repair terminates the repetitive inspections required by paragraph (d) of AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

Note (1) to paragraph (h) of this AD: If a detailed inspection is performed, stripping the paint will help ensure accurate inspection results.

**(k) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 727-53-0149, Revision 3, dated November 2, 1989.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(m) Related Information**

(1) For more information about this AD, contact Galib Abumeri, Aerospace Engineer, Airframe Branch, ANM 120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Blvd., Suite 100, Lakewood, CA 90712 4137; phone: 562-627-5324; fax: 562-672-5210; email: [galib.abumeri@faa.gov](mailto:galib.abumeri@faa.gov).

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on July 2, 2013.

Jeffrey E. Duven,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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